PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
PATENT EXAMINING OPERATION

First Named Inventor: Laurent Di Constanzo

Serial No: 09/914,544 Group Art Unit: 1618

Filed: March 19, 2002 Examiner: Simon J. Oh

Att. Docket No.: C1190/20009 Confirmation No.: 7903

For: ORALLY DISPERSIBLE TABLET WITH LOW FRIABILITY AND METHOD FOR PRODUCING SAME

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

INTRODUCTORY COMMENTS

Applicant(s) hereby request(s) review of the Final Rejection in the above-identified application.

No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated on the attached sheet(s) entitled Remarks/Arguments. The Remarks/Arguments section does not exceed five pages in length.

Respectfully submitted,

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May 1, 2006

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Please charge or credit our Account No. 03-0075 as necessary to effect entry and/or ensure consideration of this submission.

REMARKS/ARGUMENTS

Summary of the Claimed Subject Matter

Claim 21, the independent product claim on appeal, recites the inventors' discovery of a new and advantageous rapidly disintegrating tablet that disintegrates in the mouth on contact with saliva in less than 30 seconds, forming an easy to swallow suspension. This tablet is obtained by direct compression of a dry mixture of coated microcrystals or microgranules of an active substance and excipients including at least one disintegrating agent, a soluble agent and a lubricating agent. Furthermore, contrary to conventional rapidly disintegrating tablets that disintegrate in the mouth on contact with saliva in less than 30 seconds, forming an easy to swallow suspension, in the tablets according to the invention the lubricating agent, which is in powder form, is not homogenously distributed throughout the whole tablet, but is distributed on the tablet surface for its greater part or in its totality. Finally, the friability of the tablet is less than 1 %.

The inventors have discovered that the distribution of the greater part or the totality of the lubricating agent on the tablet surface permits to obtain rapidly disintegrating tablets that disintegrate in the mouth on contact with saliva in less than 30 seconds, forming an easy to swallow suspension and having a friability of less than 1%, by direct compression of a dry mixture of coated microcrystals or microgranules of an active substance.

Claim 31, the independent process claim on appeal, recites the inventors' discovery of a new and advantageous process for producing a tablet according to claim 21. The process includes choosing, firstly, an active substance in the form of coated microcrystals or microgranules and secondly, a set of excipients including a disintegrating agent, a soluble agent and a lubricating agent. Then the active substance and the excipients are dry mixed, with the exception of greater part or the totality of the lubricating agent. In a third step, the previously obtained mixture is introduced into the cavity of a compression device, onto the walls of which the necessary amount of lubricating agent has been applied in advance. Finally, the mixture is compressed and the so obtained tablet is ejected.

The inventors have discovered that this combination of processing conditions results in a tablet that disintegrates in the mouth on contact with saliva in less than 30 seconds, forming an easy to swallow suspension, having most or all of the lubricating agent distributed on the tablet surface and having a friability of less than 1%. See page 1, lines 6 to 8, and page 2, lines 10 to 16.

The rapidly disintegrating tablet of claim 21, as well as the tablet obtained by the process of claim 31, may be packaged by standard operations, i.e., using conventional industrial machinery. The tablet is sufficiently hard to enable it to be removed easily from a blister in which it is packaged, by tearing, perforating or breaking the seal of the blister pack by pushing the tablet, with a substantially reduced risk of breaking. See page 5, lines 12 to 16.

Issue on Appeal

The sole issue on appeal is whether claims 21-39 would have been obvious within the meaning of 35 U.S.C. §103(a), based on the collective disclosures of the three references applied in combination, namely: Hunter et al. (6,391,337); Schmitz et al. (6,079,968); and Valentine (4,684,534).

Only the first two references listed above were relied upon for allegedly teaching the tablet recitations of base claim 21. Valentine is cited only for its alleged teachings relating to particle sizes of lubricant.

Secondary References Fail to Remedy
Deficiencies of Properly Characterized Primary Reference

Hunter et al. is said to teach all features of claim 1 except that the greater part or the totality of the lubricating agent is distributed on the tablet surface.

However, it does not. The tablets disclosed in Hunter et al. do not contain coated microcrystals or microgranules of an active substance, but rather contain uncoated granular acetaminophen. Furthermore, the tablets of Hunter at al do not have a friability of less than 1%. Finally, Hunter et al. solely teaches that the disclosed tablets have a relatively rapid disintegration rate, but does not disclose a disintegration rate in the mouth on contact of less than 30 seconds. See column 5, lines 27 – 28.

Schmitz et al. does not remedy these shortcomings of Hunter et al. for reference purposes relative to the claims on appeal, as Schmitz was relied upon solely for a teaching of methods of manufacturing tablets wherein the lubricant is entirely or mostly applied to the outer surface of the tablet, and in fact does not describe any of the features missing in Hunter et al.

Likewise, Valentine is not seen to disclose any of these features either (nor was it relied upon for that purpose).

The proposed rejection of claim 21 (and dependent claims 22 to 30 and 33 to 37) is therefore unsustainable, as no applied reference discloses or suggests any of the presence of coated microcrystals or microgranules, a friability of less than 1% and a disintegration rate in the mouth on contact with saliva of less than 30 seconds.

With respect to the process claims it is respectfully submitted that only the first two references listed above were relied upon for allegedly teaching the process recitations of claim 31, with the third one having been cited only as a teaching document relating to particles sizes of lubricant.

Hunter et al. is said to teach all steps of claim 31 except that the necessary quantity of lubricating agent is applied to the walls of the cavity of a compression device prior to feeding the mixture to be compressed into said cavity.

However, it does not. Hunter et al. does not disclose the first step of the process of the invention, in particular it does not disclose choosing an active substance in the form of coated microcrystals or microgranules.

Schmitz et al. does not remedy the shortcoming of Hunter et al. for reference purposes relative to the claims on appeal, as Schmitz was relied upon solely for a teaching of methods of manufacturing tablets wherein the lubricant is entirely or mostly applied to the outer surface of the tablet, and in fact does not describe choosing an active substance in the form of coated microcrystals or microgranules.

Likewise, Valentine is not seen to disclose choosing an active substance in the form of coated microcrystals or microgranules, either (nor was it relied upon for that purpose).

The proposed rejection of claim 31 (and dependent claims 32 and 38-39) is therefore unsustainable, as no applied reference discloses or suggests the first step of the claim, in particular choosing an active substance in the form of coated microcrystals or microgranules.

The applied references also fail to disclose or suggest the combination of direct compression of a mixture of an active substance and excipients including at least one disintegrating agent, a soluble agent and no or a small amount of lubricating agent and of applying the greater part or the totality of the lubricating agent to the surface of the tablet. The Final Rejection at the paragraph bridging pages 3-4 mistakenly asserts that one of ordinary skill in the art would have been motivated to combine the Hunter et al. and Schmitz et al. references to create an improved process of making pharmaceutical dosage forms that meters out tablet lubricants in a more efficient manner in such a way that minimizes caking of lubricants on tablet dies. Minimizing the caking of lubricant on tablet dies is indeed an object of the device for spraying pulverulent lubricants onto punches and dies of tableting presses of Schmitz et al. See column 1, lines 45 to 51, and column 3, lines 18 to 21. However, minimizing caking of lubricants on tablet dies is not an object of the present invention, since the prior art tablets described in documents FR97 09233, FR 98 14034, FR 92 08642 and FR 91 09245 do not present this drawback. The object of the present invention is primarily to provide rapidly disintegrating tablets of the above type, having a pleasant taste and a friability that enables them to be packaged and transported by conventional means, as well as to ensure ease of use by the patient. See page 1, lines 16 to 22. Hence, one of ordinary skill in the art, confronted with the aforementioned problem would not at all be motivated to combine the Hunter et al. and Schmitz et al. references and would even less expect such a combination to resolve the above problem.

From the foregoing discussion, it is believed to be apparent that the rejection of claims 21-39 is improper and should be reversed. Accordingly, such action is respectfully requested.